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[Translation done.]

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Summary

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(57) [Abstract]
this invention offers the electrical connector for connection of electronic memory card (10), and this contains the mould main part currently made from an insulating material which has a flat up side (24) and two or more electric conductors which are the gestalten of the blade (14) which can deform elastically. The 1st portion into which it curved for each contact blade (14) contacting one pad of a card (26), The main part (12 16) which possesses the 2nd edge (30) which connects a blade (14) to the processing circuit of read / write-in equipment, and is made from an insulating material The upper flange (38) which extends in the 2nd end-connection section (30) upper part of a blade (14) at a longitudinal direction is included. It is characterized by a flange (38) enabling access to the 2nd edge from the up front face (24) of a connector (10) by infrared welding, especially including [therefore] the 2nd end-connection section (30) and 1 set of crevices (48) which align in a straight line, in order to connect these.

[Translation done.]

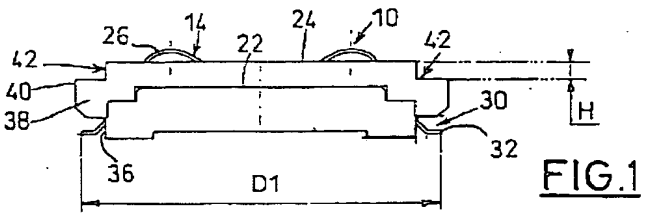

FIG.1

[Translation done.]

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CLAIMS

[Claim(s)]

In the connector characterized by providing the following The main part (12 16) currently made from an insulating material equips the 2nd end-connection section (30) upper part of a blade (14) with the upper flange (38) which projects in a longitudinal direction. This flange (38) for connection by infrared radiation or ultrasonic welding The electrical connector characterized by having the 2nd end-connection section (30) and 1 set of notches (48) arranged in a straight line in order to enable access to these 2nd edge from the up front face (24) of a connector (10) (1) The main part which consists of an insulating material which is an electrical connector (10) for connecting with electronic memory card equipped with two or more electric contact pads which align in parallel with the direction which inserts a card on 1 main front face at read / write-in equipment, and has a flat up front face (24) parallel to the path of insertion of a card and by which the mould was carried out It is the 1st curved edge (26) which extends in parallel with the path of insertion of a card and which contains elastically two or more conductors of the configuration of the blade (14) which can deform, and each contact blade (14) contacts one pad of a card, and projects on the flat up front face (24) of a connector main part. The center section for connecting a blade (14) with a main part The 2nd edge for connecting a blade (14) to the processing circuit of read / write-in equipment (30) (2) A flange is an electrical connector according to claim 1 characterized by the bird

clapper from two parallel portions (38) arranged on two parallel sides (36) of a connector main part, respectively.
(3) A flange (38) is an electrical connector according to claim 1 or 2 characterized by having projected in the longitudinal direction across the 2nd edge (30) for connecting a contact blade (14).
(4) A flange (38) is the electrical connector of 3 the claim 1 which appoints the boundary of the shoulder (42) which makes it possible to be attached into opening (44) by which the connector (10) was formed in the printed-circuit board (P) of the up front face (24) of a connector, and is characterized by using the up front face (24) of a connector (10) as the same front face as the front face (50) where a printed-circuit board (P) corresponds, or given in
(5) It is the electrical connector of 4 the claim 1 which the main part currently made from an insulating material of a connector contains the 1st portion (12) which forms the base material for contact blades (14), and the 2nd portion (16) which forms up covering, and is characterized by forming the flange (38) on covering (16), or given in any 1 term.
(6) A shoulder (42) is the electrical connector according to claim 5 combined with the claim 4 characterized by being formed in covering (16).

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
Improved electrical connector for electronic memory card connection this invention relates to the electrical connector for connection of the electronic memory card called microcircuit card which contains two or more electric contact pads arranged in parallel to the path of insertion of the card to read / write-in equipment on the one main front face.
this invention relates to the electrical connector containing the mould main part made from an insulating material which extends in parallel with a flat up front face

parallel to especially the path of insertion of a card, and the path of insertion of a card, and which has elastically two or more conductors of the blade form which can deform. Providing the 1st curved edge which projects each contact blade on the flat up front face of a main part, and contacts one pad of a card, the contact blade possesses further the center section which connects a blade with a main part, and the 2nd edge which connects a blade to the processing circuit of read / dictation equipment.

One design of such a connector is indicated and shown in the French country patent/[93rd] No. 15633 specification.

In such a design, the main part is made from two portions, the upper part which forms covering contains the circumference flange, and this flange adjoined the up front face of a connector, has been arranged, and is projected on the 2nd [of a contact blade] end-connection section at the longitudinal direction.

Although such a flange has the advantage from which the 2nd end-connection section is protected partially at least when storing a connector, and when dealing with this, it blocks easy connection of infrared radiation, ultrasonic welding, or the 2nd end-connection section by solder combination, for example.

The purpose of this invention is offering the outstanding new equipment to such a connector that makes it possible to improve this fault.

For this reason, although this invention is the connector of the above-mentioned type The main part currently made from an insulating material contains the upper flange which projects on the 2nd [of a blade] end-connection section at a longitudinal direction. The flange contains the 2nd end-connection section and 1 set of notches arranged in a straight line, and especially by it, in order to connect these by infrared welding, it makes it possible to access from the up front-face side of a connector to these 2nd edge.

According to another feature of this invention A flange consists of two parallel portions arranged on two parallel sides of a connector main part, respectively. flange is projected in a longitudinal direction across the 2nd edge in order to connect a contact blade. A flange So that a connector may be installed into opening formed into the printed-circuit board in the state where the front face and connector up front face where a printed-circuit board corresponds are in agreement by the up front face of a connector The boundary of a shoulder is appointed. The main part currently made from an insulating material of a connector contains the 1st portion which forms the base material of a contact blade, and the 2nd portion which forms up covering, and a flange is formed on covering. The shoulder is formed during covering.

Probably, other features and advantages of this invention will be clear from detailed explanation of the following which referred to the accompanying drawing.

Drawing 1 is the side elevation of the 1st example of the connector by this invention.

Drawing 2 is drawing which looked at the connector shown by drawing 1 from the top.

Drawing 3 is drawing which looked at the connector shown by drawing 1 from the bottom.
Drawing 4 is a side elevation on the left-hand side of drawing 3 .
Drawing 5 is drawing 1 and the analogous view having shown the 2nd example of the connector by this invention.
the connector 10 for connection of electronic memory card (not shown) in drawing 1 or 4 -- being shown -- **** -- this design -- the [French country patent] -- it is shown in detail by the No. 93/15633 specification
The connector 10 is fundamentally formed with the main part currently made from an insulating material containing the 1st portion 12 which forms the base and carries out the duty as a base material to the electric conduction contact blade 14.
The main part currently made from an insulating material contains the upside portion about the 2nd portion, i.e., drawing 1 , again, this is manufactured with the gestalt of covering 16, and the lower front face 18 limits housing 20, the upper part of a base material 12 is contained here, and the lower front face 18 counters the up front face 22 of a base material 12, and is supported.
The up front face 24 of covering 16 is a flat surface, in the sense of this invention, the up front face of the flat surface of a connector 10 is constituted, and the 1st edge 26 where the contact blade 14 curved from here projects upward perpendicularly through the slot 28 formed during covering 16.
Eight contact blades 14 each are fixed to a base material 12 by the interstitial segment (not shown), and this carries out termination of the connection with the electric conduction field where the printed-circuit board which forms some of read / dictation equipments (not shown in drawing 1 or 4) corresponds at the 2nd edge 30 made possible.
It is the tab with which the end-connection section 30 is refracted at 90 degrees in the example shown by drawing 1 or 4, and this free edge 32 can counter the electric conduction field of a printed-circuit board, and can be supported, and the lower front face 34 of a base material 12 exists on the 1 front face.
The 2nd end-connection section 30 projects in a longitudinal direction from the side 36 which counters by parallel of a base material 12.
The distance D1 corresponding to the whole side of the 2nd end-connection section 30 of the contact blade 14 is shown in drawing 1 .
Covering 16 contains the parallel part 38 of two longitudinal directions of the side flange which extends above the 2nd end-connection section 30 at a longitudinal direction.
As shown in drawing 1 and 2, the width of face D2 of the whole which is the distance between the sides 40 in which two portions 38 of a flange counter is slightly larger than distance D1, and when dealing with a connector, the 2nd end-connection section 30 is protected.
According to this invention, each portion 38 of a flange has a series of notching sections arranged at it and the straight line, respectively above the 2nd end-

connection section 30, and in order to weld by it using infrared radiation, it can access the end-connection section from the up front face 24 of a connector 10 at a perpendicular.
The boundary of the shoulder 42 of two sides which make it possible to attach a connector 10 into the opening 44 of the corresponding size formed in a printed-circuit board P is appointed, and the 2nd edge or connection tab 30 is a straight-line tab which extends in a longitudinal direction so that it may be welded to the opposite front face 46 of a printed-circuit board in this case as a flange 38 is formed downward more slightly than the up front face 24 of a connector 10 and it is shown by drawing 5 .
For this purpose, height H of a shoulder 42 corresponds to the thickness of a printed-circuit board P, therefore the up front face 24 of a connector 10 turns into the front face 50 where a printed-circuit board P corresponds, and the same flat surface.
A front face 24 and a front face 50 form the flat surface which continued to memory card so that it might follow and slide.
In order to make execution of welding operation easy, especially since the degree of welding beam angle is increased and the path of welding is made possible, the edge which a notch counters as shown by the drawing can be beveled.
It is possible to be manufactured as a single mould portion by which the explained this invention is not limited to the connector design from which the main part is made by two portions, but the main part is made from an insulating material.

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DRAWINGS

[Drawing 1]

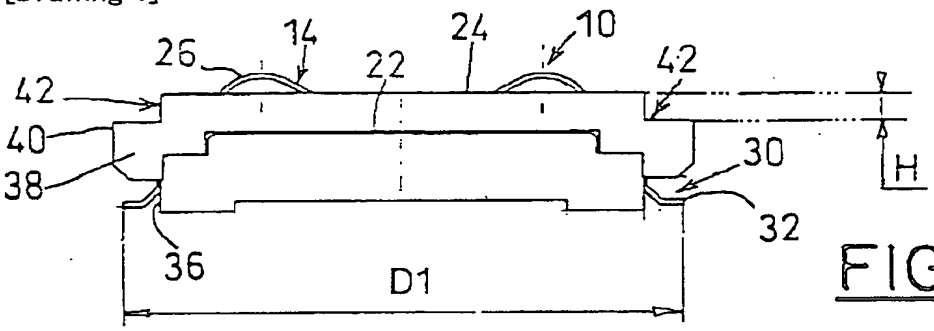


FIG.1

[Drawing 2]

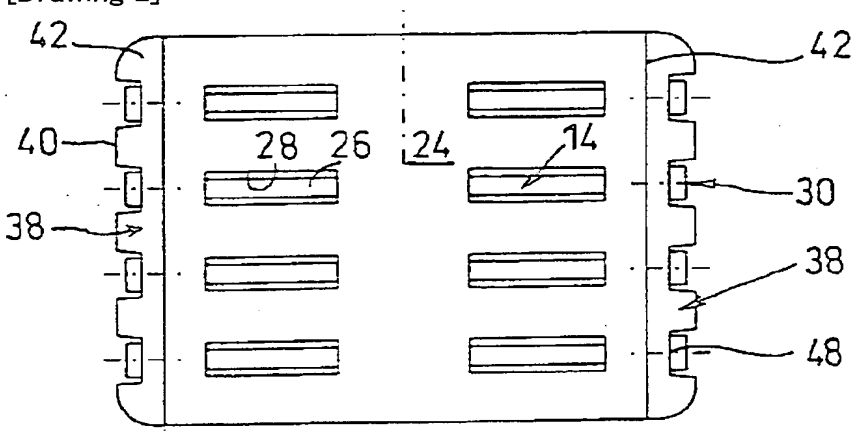
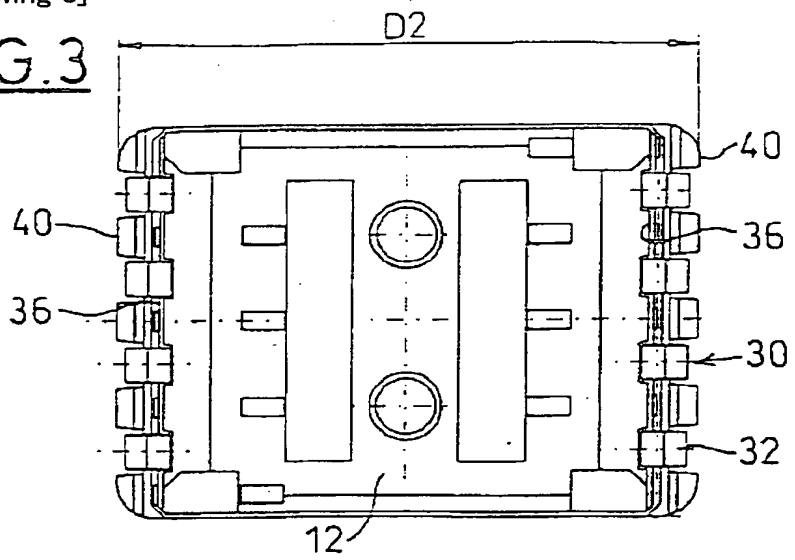


FIG.2

[Drawing 3]

FIG.3



[Drawing 4]

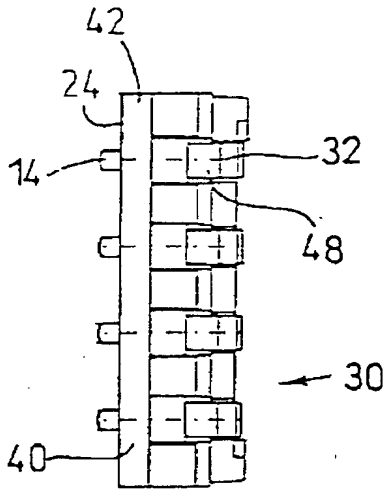


FIG.4

[Drawing 5]

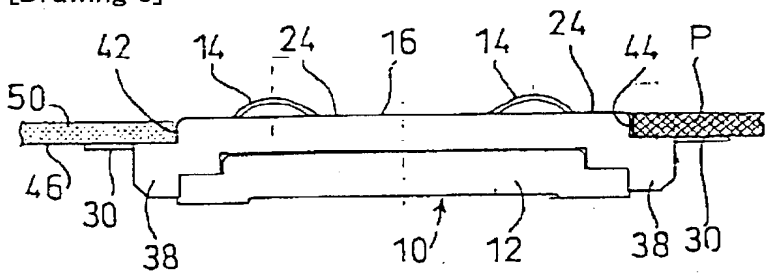


FIG.5

[Translation done.]

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Ｈ０１Ｒ　23/68		6901－5Ｂ	Ｈ０１Ｒ　23/68	Ｄ

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(54)【発明の名称】　改良された電子メモリカード接続用電気コネクタ

(57)【要約】
本発明は、電子メモリカードの接続用電気コネクタ（10）を提供し、これは平坦な上部面（24）と、弾性的に変形可能なブレード（14）の形態である複数の電気導体とを有する絶縁性材料から作られているモールド本体を含んでおり、各接触ブレード（14）はカードの１つのパッドと接触するための湾曲した第１の部分（26）と、ブレード（14）を読取り／書込み装置の処理回路に接続する第２の端部（30）とを具備し、絶縁性材料から作られている本体（12,16）は、ブレード（14）の第２の接続端部（30）上方に横方向に延在する上部フランジ（38）を含んでおり、フランジ（38）は第２の接続端部（30）と一直線に整列する１組の凹部（48）を含み、従って特に赤外線溶接により、これらを接続する目的でコネクタ（10）の上部表面（24）から第２の端部へのアクセスを可能にすることを特徴とする。

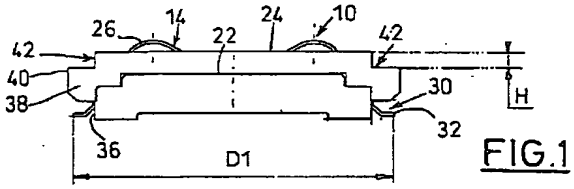


FIG.1

【特許請求の範囲】

（1）1主表面上に読取り／書込み装置にカードを挿入する方向に平行に整列する複数の電気接触パッドを備えている電子メモリカードと接続するための電気コネクタ（10）であって、カードの挿入方向に平行の平らな上部表面（24）を有する絶縁性材料からなるモールドされた本体と、カードの挿入方向に平行に延在する弾性的に変形可能なブレード（14）の形状の複数の導電体とを含んでおり、各接触ブレード（14）は、カードの1つのパッドと接触しコネクタ本体の平らな上部表面（24）上に突出する湾曲した第1の端部（26）と、ブレード（14）を本体に連結するための中央部と、ブレード（14）を読取り／書込み装置の処理回路へ接続するための第2の端部（30）とを具備しているコネクタにおいて、

絶縁性材料から作られている本体（12,16）はブレード（14）の第2の接続端部（30）上方に横方向に突出する上部フランジ（38）とを備えており、このフランジ（38）は赤外線または超音波溶接等による接続のためにコネクタ（10）の上部表面（24）からこれらの第2の端部へのアクセスを可能にするために第2の接続端部（30）と一直線に配置する1組の切欠き部（48）を有していることを特徴とする電気コネクタ。

（2）フランジはコネクタ本体の2つの平行な側面（36）上にそれぞれ配置されている2つの平行な部分（38）からなることを特徴とする請求項1記載の電気コネクタ。

（3）フランジ（38）は接触ブレード（14）を接続するため

の第2の端部（30）を越えて横方向に突出していることを特徴とする請求項1または2記載の電気コネクタ。

（4）フランジ（38）はコネクタの上部表面（24）によりコネクタ（10）が印刷回路板（P）に形成された開口（44）中に取付けられることを可能にする肩部（42）の境界を定め、コネクタ（10）の上部表面（24）は印刷回路板（P）の対応する表面（50）と同一表面とされていることを特徴とする請求項1乃至3のいずれか1項記載の電気コネクタ。

（5）コネクタの絶縁性材料から作られている本体は接触ブレード（14）用の支

持体を形成する第1の部分（12）と、上部カバーを形成する第2の部分（16）とを含んでおり、フランジ（38）はカバー（16）上に形成されていることを特徴とする請求項1乃至4のいずれか1項記載の電気コネクタ。

（6）肩部（42）はカバー（16）に形成されていることを特徴とする請求項4と組合せた請求項5記載の電気コネクタ。

【発明の詳細な説明】

改良された電子メモリカード接続用電気コネクタ

本発明は、読取り／書込み装置へのカードの挿入方向に対して並列に配置されている複数の電気接触パッドを１つの主表面上に含んでいるマイクロ回路カードと呼ばれる電子メモリカードの接続用電気コネクタに関する。

本発明は、特にカードの挿入方向に平行な平らな上部表面と、カードの挿入方向に平行に延在する弾性的に変形可能なブレード形態の複数の導電体とを有する絶縁性材料から作られたモールド本体を含んでいる電気コネクタに関し、各接触ブレードは本体の平らな上部表面上に突出してカードの１つのパッドと接触する湾曲した第１の端部を具備し、さらに接触ブレードはブレードを本体に連結する中央部と、読取り／書取り装置の処理回路にブレードを接続する第２の端部とを具備している。

このようなコネクタの１設計は仏国特許第93/15633号明細書に記載され示されている。

このような設計では、本体は２つの部分で作られており、カバーを形成する上部部分は周囲フランジを含んでおり、このフランジはコネクタの上部表面に隣接して配置され、接触ブレードの第２の接続端部上に横方向に突出している。

このようなフランジは、コネクタを貯蔵するとき並びにこれを取扱うとき少なくとも部分的に第２の接続端部を保護する利点があるが、例えば赤外線または超音波溶接、或いははんだ結合による第２の接続端部の容易な接続を妨害する。

本発明の目的はこの欠点を改善することを可能にするこのようなコネクタに対するすぐれた新規な装置を提供することである。

このため、本発明は前述のタイプのコネクタであるが、絶縁性材料から作られている本体は、ブレードの第２の接続端部上に横方向に突出する上部フランジを含んでおり、フランジは第２の接続端部と一直線に配置されている１組の切欠き部を含んでおり、それによって特に赤外線溶接により、これらを接続するためにコネクタの上部表面側からこれらの第２の端部へアクセスすることを可能にする

。

本発明の別の特徴によると、

フランジはコネクタ本体の２つの平行な側面上にそれぞれ配置されている２つの平行な部分からなり、

フランジは接触ブレードを接続するため第２の端部を越えて横方向に突出し、

フランジは、印刷回路板の対応する表面とコネクタ上部表面が一致する状態で印刷回路板中に形成された開口中にコネクタが設置されるようにコネクタの上部表面により、肩部の境界を定め、

コネクタの絶縁性材料から作られている本体は接触ブレードの支持体を形成する第１の部分と、上部カバーを形成する第２の部分とを含んでおり、フランジはカバー上に形成され、

肩部はカバー中に形成されている。

本発明のその他の特徴および利点は、添付図面を参照した

以下の詳細な説明から明白であろう。

図１は本発明によるコネクタの第１の実施例の側面図である。

図２は図１で示されているコネクタを上から見た図である。

図３は図１で示されているコネクタを下から見た図である。

図４は図３の左側の側面図である。

図５は本発明によるコネクタの第２の実施例を示した図１と類似の図である。

図１乃至４は、電子メモリカード（図示せず）の接続用のコネクタ10を示しており、この設計は仏国特許第93/15633号明細書で詳細に示されている。

コネクタ10はベースを形成し導電接触ブレード14に対する支持体としての役目をする第１の部分12を含んだ絶縁性材料から作られている本体により基本的に形成されている。

絶縁性材料から作られている本体はまた第２の部分、即ち図１に関して上部の部分を含んでおり、これはカバー16の形態で製造され、その下部表面18はハウジング20を限定し、ここに支持体12の上部部分が収納され、下部表面18は支持体12の上部表面22に対向して支持される。

カバー16の上部表面24は平面であり、本発明の意味では、コネクタ10の平面の上部表面を構成し、ここから接触ブレード14の湾曲した第１の端部26がカバー16中に形成されたスロット28を通って垂直に上方向に突出する。

各８個の接触ブレード14は中間部分（図示せず）により支持体12に固定され、これは読取り／書取り装置（図１乃至４

では図示せず）の一部を形成する印刷回路板の対応する導電領域との接続を可能にする第２の端部30で終端する。

図１乃至４で示されている実施例では、接続端部30は９０°に屈折しているタブであり、この自由端部32は印刷回路板の導電領域に対向して支持することができ、その１表面上では支持体12の下部表面34が存在する。

第２の接続端部30は支持体12の平行で対向する側面36から横方向に突出する。

図１には接触ブレード14の第２の接続端部30の横全体に対応する距離Ｄ１が示されている。

カバー16は第２の接続端部30の上方に横方向に延在する側面フランジの２つの横方向の平行部分38を含んでいる。

図１および２で示されるように、フランジの２つの部分38の対向する側面40間の距離である全体の幅Ｄ２は僅かに距離Ｄ１よりも大きく、コネクタを取扱うとき第２の接続端部30を保護する。

本発明によると、フランジの各部分38は第２の接続端部30の上方にそれと一直線にそれぞれ配置されている一連の切り欠き部を有しており、それによって、例えば赤外線を用いて溶接を行うためにコネクタ10の上部表面24から垂直に接続端部をアクセスすることができる。

フランジ38はコネクタ10の上部表面24よりも僅かに下に形成され、図５で示されているように、印刷回路板Ｐに形成される対応した大きさの開口44中にコネクタ10が取付けられることを可能にする２つの側面の肩部42の境界を定め、第２の

端部または接続タブ30はこの場合、印刷回路板の対向表面46に溶接されるように横方向に延在する直線タブである。

この目的で、肩部42の高さＨは印刷回路板Ｐの厚さに対応し、従ってコネクタ10の上部表面24は印刷回路板Ｐの対応する表面50と同一平面となる。

表面24と表面50は従って滑動するようにメモリカードに対して連続した平面を形成する。

溶接動作の実行を容易にするため、特に溶接ビーム角度を増加し溶接の通路を可能にするため、図面で示されているように切欠き部の対向するエッジを面取りすることができる。

説明した本発明は本体が２部分に作られているコネクタ設計に限定されず、本体が絶縁性材料から作られている単一のモールド部分として製造されることが可能である。

【図１】

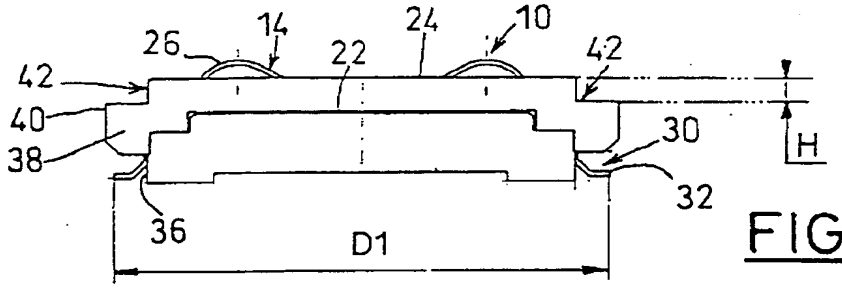


FIG.1

【図２】

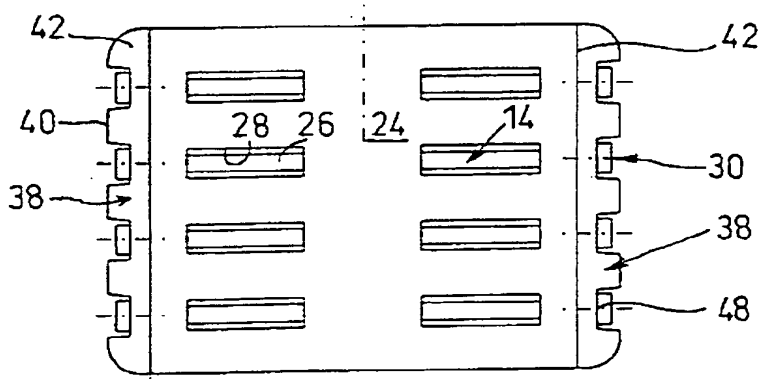
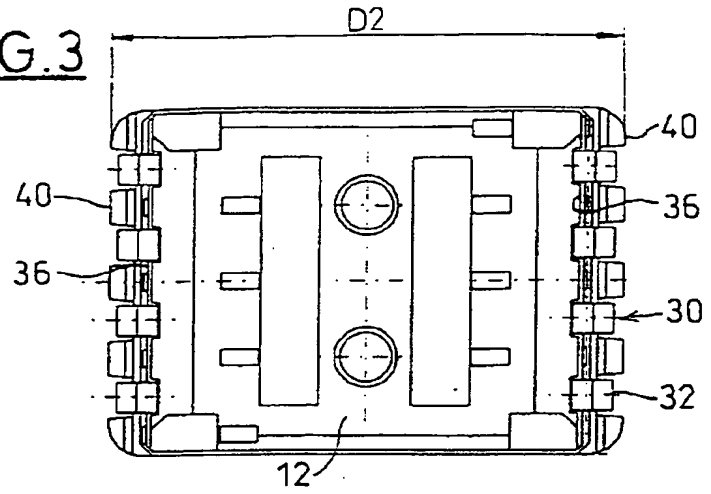


FIG.2

【図３】

FIG.3



【図４】

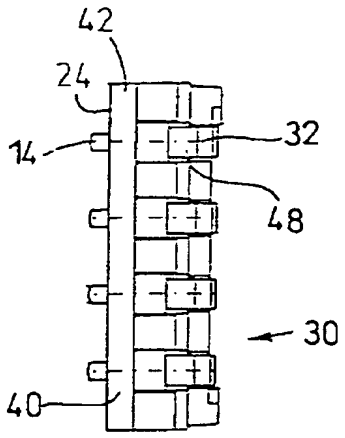


FIG.4

【図５】

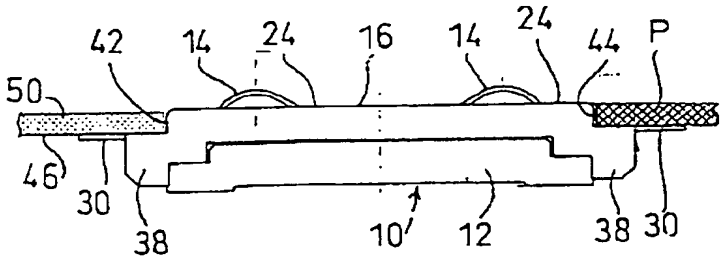


FIG.5

【国際調査報告】

INTERNATIONAL SEARCH REPORT

Internat...al Application No
PCT/FR 95/00710

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 G06K7/06 H01R23/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 G06K H01R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP,A,0 366 513 (ITT COMPOSANTS ET INSTRUMENTS) 2 May 1990 see abstract; claim 1; figure 1	1
A	EP,A,0 274 534 (HOSIDEN ELECTRONICS CA., LTD) 20 July 1988 see page 9, paragraph 2; figure 1	1
A	EP,A,0 568 971 (MOLEX INCORPORATED) 10 November 1993 see column 4, line 43 - line 47; figure 4	1,4,5
A	US,A,3 638 033 (JOHNSON ET AL.) 25 January 1972 see figure 2	1

☐ Further documents are listed in the continuation of box C. ☒ Patent family members are listed in annex.

* Special categories of cited documents :

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Date of the actual completion of the international search	Date of mailing of the international search report
28 September 1995	06. 10. 95

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+ 31-70) 340-2040, Tx. 31 651 epo nl, Fax (+ 31-70) 340-3016	Chiarizia, S

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INTERNATIONAL SEARCH REPORT

...ormation on patent family members

Interna ...l Application No
PCT/FR 95/00710

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US-A-3638033	25-01-72	NONE		